

Application No. 09/674,971
Amendment dated May 16, 2005
Reply to Office Action of December 15, 2004

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1-28 (cancelled).

29. (currently amended) A method of inserting an artificial implant into a disc space between two adjacent vertebral bodies, the method comprising the steps of:
- providing an artificial implant having an upper surface and a lower surface, the upper and lower surfaces being at least arcuate in part and adapted to contact an adjacent vertebral body, the implant having a generally non-linear trailing end being configured to generally conform to at least a portion of the natural anatomical curvature of at least one of the anterior and lateral aspects of the vertebral bodies;
 - forming an opening across a height of the disc space and into a portion of each of the adjacent vertebral bodies, the opening being at least in part curved across the height of the disc space;
 - inserting the implant into the opening; and
 - aligning the trailing end of the implant ~~with the anatomical curvature of the adjacent vertebral bodies so that~~ a majority of the trailing end of the implant is aligned with the anatomical curvature of the adjacent vertebral bodies and does not substantially protrude from the spine.
30. (original) The method of claim 29, further comprising the step of attaching a driver instrument to the implant to insert the implant into the opening formed during the step of forming.
31. (original) The method of claim 29, wherein the implant is a fusion implant having a hollow therein, further comprising the step of loading the implant with a fusion promoting material prior to the step of inserting.

Application No. 09/674,971
Amendment dated May 16, 2005
Reply to Office Action of December 15, 2004

32. (original) The method of claim 31, wherein the fusion promoting material includes at least one of bone, coral, bone morphogenetic protein, and genes coding for the production of bone.
33. (original) The method of claim 29, further comprising the step of combining the implant with a fusion promoting material.
34. (original) The method of claim 33, wherein the fusion promoting material includes at least one of bone, coral, bone morphogenetic protein, and genes coding for the production of bone.
35. (original) The method of claim 29, wherein the step of forming includes the sub-step of drilling the opening.
36. (original) The method of claim 29, wherein the step of inserting includes linearly inserting the implant into the opening.
37. (original) The method of claim 29, wherein the step of inserting includes rotating the implant into the opening.
38. (original) The method of claim 29, wherein the step of inserting includes screwing the implant into the opening.
39. (currently amended) A method of inserting a pair of artificial implants into a disc space between two adjacent vertebral bodies, the method comprising the steps of:

providing a first artificial implant having a width less than one half the width of the disc space and a generally non-linear trailing end being configured to generally conform to at least a portion of the natural anatomical curvature of at least one of the anterior and lateral aspects of the vertebral bodies;

providing a second artificial implant having a width less than one half the width of the disc space and a generally non-linear trailing end being configured to generally conform to at least a portion of the natural anatomical curvature of at least one of the anterior and lateral aspects of the vertebral bodies;

forming at least one opening across a height of the disc space and into a portion of each of the adjacent vertebral bodies, the at least one opening being at least in part curved across the height of the disc space;

Application No. 09/674,971
Amendment dated May 16, 2005
Reply to Office Action of December 15, 2004

inserting the first implant into the at least one opening;
inserting the second implant into the at least one opening; and
aligning the trailing end of each implant ~~with the anatomical curvature of the adjacent vertebral bodies so that a majority of the trailing end of each implant~~
is aligned with the anatomical curvature of the adjacent vertebral bodies and
does not substantially protrude from the spine.

40. (original) The method of claim 39, wherein at least one of said providing steps includes providing an implant with an asymmetrical trailing end.
41. (original) The method of claim 39, wherein each of said providing steps includes providing an implant with a symmetrical trailing end.
42. (original) The method of claim 39, wherein each implant is a fusion implant having a hollow therein, further comprising the step of loading each implant with fusion promoting material prior to the steps of inserting.
43. (original) The method of claim 42, wherein the fusion promoting material includes at least one of bone, coral, bone morphogenetic protein, and genes coding for the production of bone.
44. (original) The method of claim 39, further comprising the step of combining at least one of the implants with a fusion promoting material.
45. (original) The method of claim 44, wherein the fusion promoting material includes at least one of bone, coral, bone morphogenetic protein, and genes coding for the production of bone.
46. (original) The method of claim 39, wherein the step of forming includes the sub-step of drilling the at least one opening.
47. (original) The method of claim 39, wherein each of the steps of inserting includes linearly inserting the implant into the at least one opening.
48. (original) The method of claim 39, wherein each of the steps of inserting includes rotating the implant into the at least one opening.
49. (original) The method of claim 39, wherein each of the steps of inserting includes screwing the implant into the at least one opening.

Application No. 09/674,971
Amendment dated May 16, 2005
Reply to Office Action of December 15, 2004

50. (new) The method of claim 29, wherein the step of aligning includes aligning a majority of the trailing end of the implant along the apophyseal rim of at least one of the adjacent vertebral bodies.
51. (new) The method of claim 29, wherein the step of providing includes providing the trailing end of the implant with a curved portion generally corresponding to the natural curvature of at least one of the anterior and lateral aspects of the vertebral bodies.
52. (new) The method of claim 39, wherein the step of aligning includes aligning a majority of the trailing end of each implant along the apophyseal rim of at least one of the adjacent vertebral bodies.
53. (new) The method of claim 39, wherein the step of providing includes providing the trailing end of at least one of the implants with a curved portion generally corresponding to the natural curvature of at least one of the anterior and lateral aspects of the vertebral bodies.